

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization

International Bureau



(43) International Publication Date 1 September 2005 (01.09.2005)

PCT

(10) International Publication Number WO 2005/080191 A1

(51) International Patent Classification⁷: B67D 5/04, B65G 65/34, B63C 11/40

B63C 7/00,

(21) International Application Number:

PCT/KR2005/000529

- (22) International Filing Date: 25 February 2005 (25.02.2005)
- (25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 10-2004-0012688

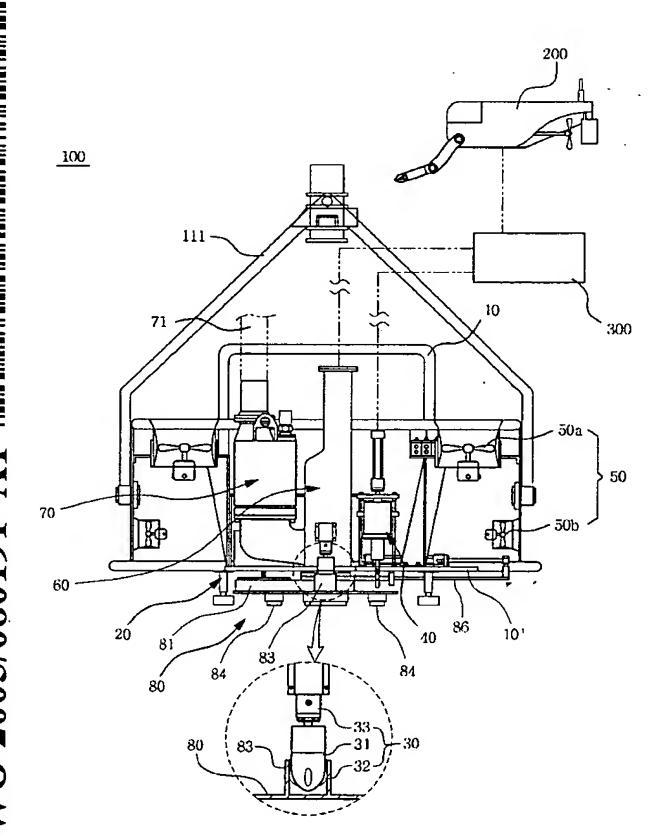
25 February 2004 (25.02.2004) KR

(71) Applicant (for all designated States except US): KOREA OCEAN RESEARCH AND DEVELOPMENT INSTITUTE [KR/KR]; 1270, Sa-dong, Sangnok-gu, Ansan-si, Gyeonggi-do 426-170 (KR).

- (72) Inventor; and
- (75) Inventor/Applicant (for US only): CHOI, Hyek-Jin [KR/KR]; 126-1204, Hanvit Apt, 99, Eoeun-dong, Yuseong-gu, Daejeon 305-755 (KR).
- (74) Agents: KIM, Heung-Jin et al.; RM305, New Seoul Bldg, 828-8, Yeoksam-dong, Gangnam-gu, Seoul 135-080 (KR).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,

[Continued on next page]

(54) Title: REMOTELY CONTROLLED APPARATUS FOR RECOVERING LIQUID IN SUNKEN SHIP AND METHOD PERFORMED BY THE SAME



(57) Abstract: A remotely controlled apparatus for transporting liquid, such as oil, toxic chemicals, or the like, in a tank of a sunken ship to a floating body, without leakage and a method performed by the apparatus are disclosed. An underwater recovery device (100) of the apparatus includes a supporting frame (10), to which a plurality of devices including a linkage (111) are fixed, chucking devices (20) for fixing the underwater recovery device (100) to the sunken ship (500), a grabber (30) for attaching the base plate (80) to the supporting frame (10), DTB systems 40 for attaching the base plate (80) to the sunken ship (500), thrusters (50) for providing a propulsive force so as to attach the supporting frame (10) to the sunken ship (500), a hole cutter (60) for drilling a hole for the recovery of the liquid, and a liquid recovery device (70) for recovering the liquid through the hole drilled in the sunken ship (500).

ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.